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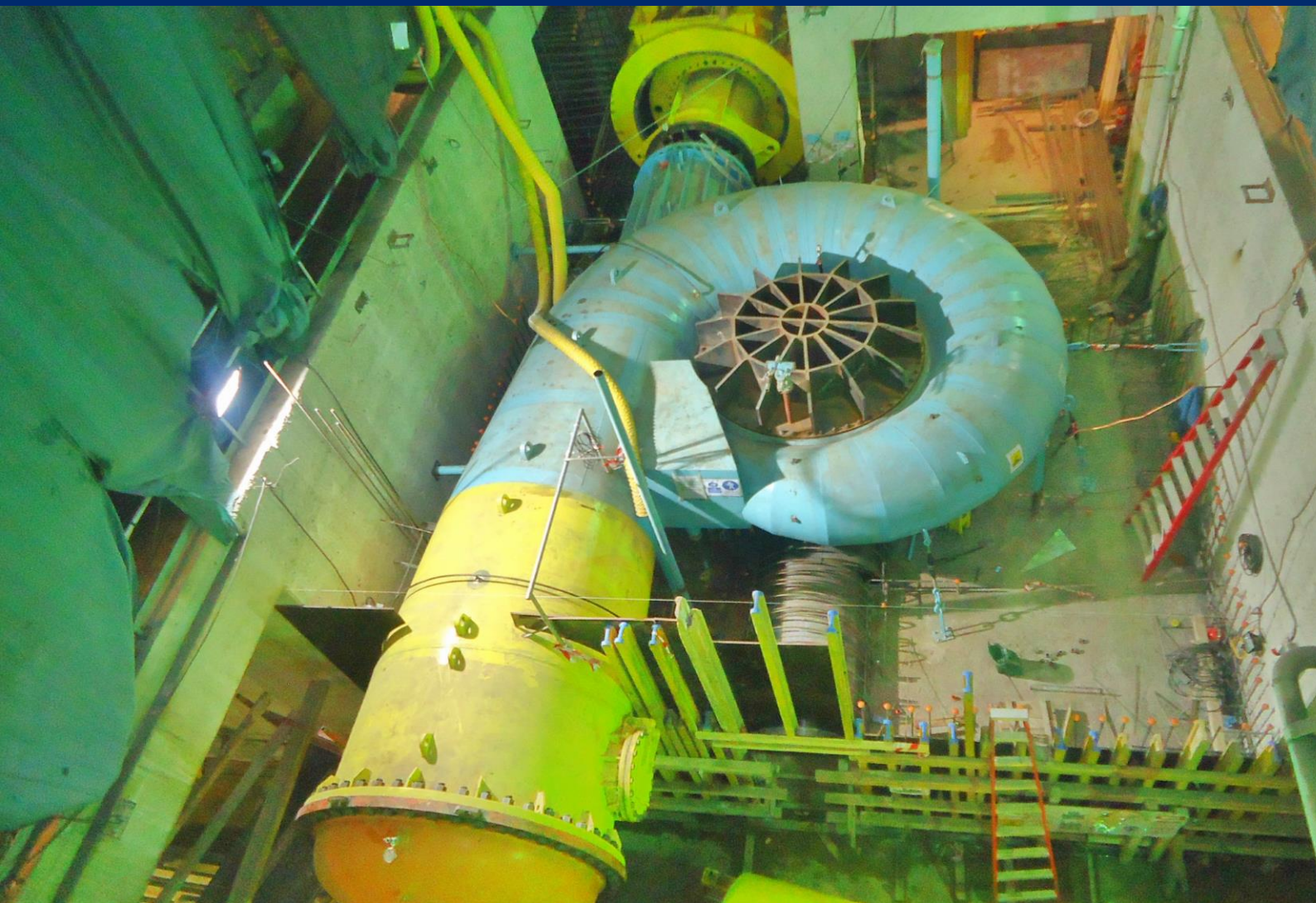
USAID
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AFGHANISTAN ENGINEERING SUPPORT PROGRAM

Contract No. EDH-I-00-08-00027-00

Task Order No. 1

Fiscal Year 2016 Second Quarter Report



April 10, 2016

This publication was produced for review by the United States Agency for International Development.
It was prepared by Tetra Tech, Inc.

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April 10, 2016

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Office of Economic Growth and Infrastructure (OEGI)
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**Re: Contract No. EDH-I-00-08-00027-00 / Task Order No. 1
Afghanistan Engineering Support Program (AESP)
Fiscal Year 2016 Second Quarter Report**

Dear [REDACTED]

Tetra Tech is pleased to submit this Second Quarterly Report for fiscal year (FY) 2016, as provided in section C.5, "Deliverables," paragraph D of the above referenced Task Order. The FY 2016 Second Quarterly (Q2) report covers the period of January 1, 2016 to March 31, 2016 for Year 7 of the Task Order.

During the second quarter of FY 2016, Tt AESP assumed full responsibility for base life support, security, overall site management and logistics at Kajaki Dam, in the role of Owner's Engineer. Through a transition process during the second quarter of FY 2016, Tt AESP mobilized teams both in Kabul and at the Kajaki Site to assume Quality Assurance (QA) and Construction Management (CMS) Services for the Kajaki Hydropower Project, as Owner's Engineer.

As part of AESP's other QA and CMS Work Orders, Tetra Tech continues the necessary oversight to ensure that projects are completed on schedule, on budget and are executed according to the required project standards and specifications. These projects include the Kajaki Dam, Sardar Girls High School Fire Doors Replacements, and the Arghandi-Ghazni Transmission Lines and Substations.

The second quarter of FY 2016 also saw Tt AESP's continued assistance with a number of active Da Afghanistan Breshna Sherkat (DABS) procurements, including Bulk Metering, Salang Tunnel Substation, and Ghazni-Kandahar East Transmission Lines and Substations.

We look forward to continuing our support of the USAID OEGI mission, and to strengthening our partnership while building a brighter future for Afghanistan. Please contact me at your convenience should you have any questions or comments regarding this report.

Respectfully,
Tetra Tech, Inc.

[REDACTED]

[REDACTED]
Chief of Party (AESP)

cc:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

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DISCLAIMER

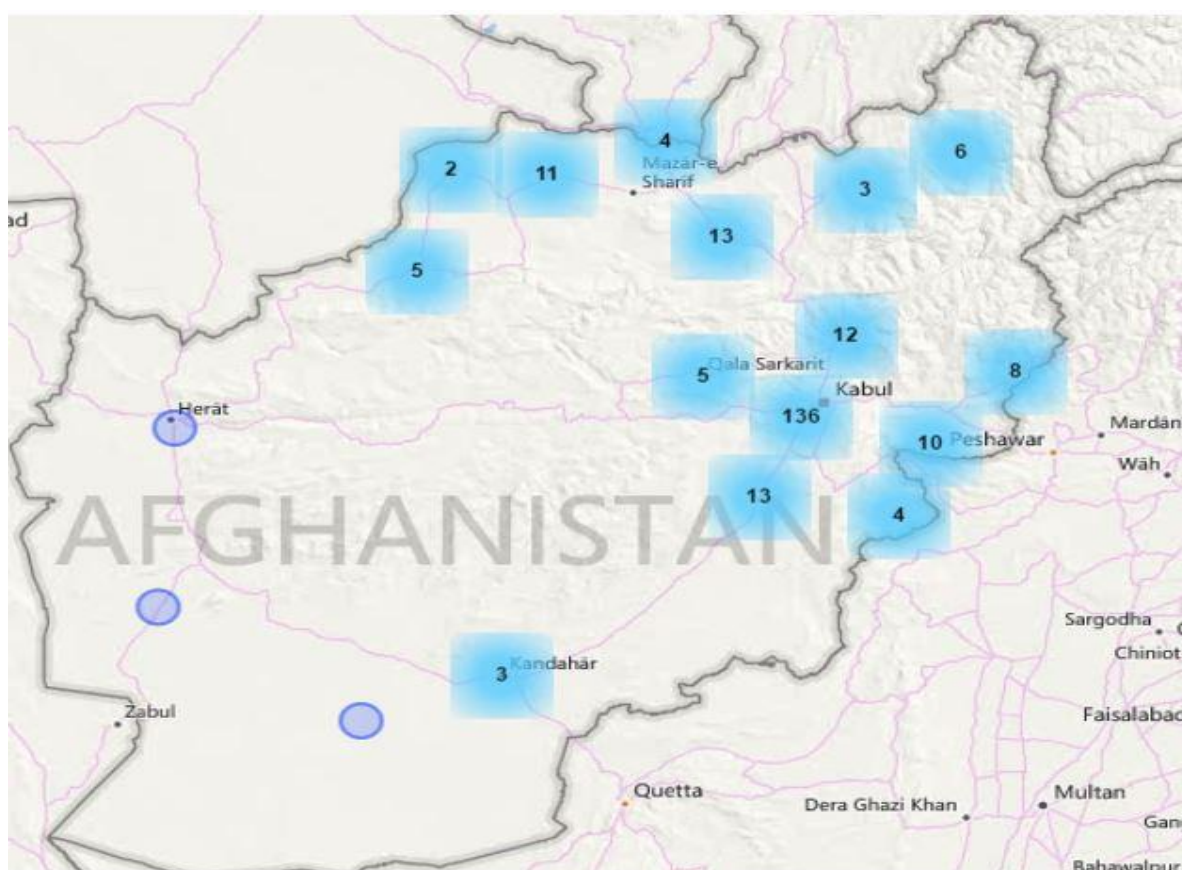
The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

PROJECT OVERVIEW

The Tetra Tech (Tt) Afghanistan Engineering Support Program (AESP) provides planning, design, engineering, and technical oversight support to Afghanistan through collaboration and coordination with the United States Agency for International Development (USAID), Afghanistan Office of Economic Growth and Infrastructure (OEGI). Through AESP work, Tt contributes to local national capacity building by mentoring and providing international caliber experience to our staff and partners. Tt AESP performs activities that complement and reinforce the activities and engineering expertise of USAID OEGI staff in the following sectors: Energy, Transportation, Vertical Structures, Technical Support and oversight, Water, and Water Sanitation.

Tt AESP consists of a Kabul-based core of expatriate engineering professionals leading a competent staff of local Afghan engineers and support professionals. Support professionals include home office, or “reachback”, support from highly-qualified US-based staff. Our local team continues to display adaptability, mobility, and responsiveness to the needs of USAID.

- Activity Start Date: November 9, 2009
- Activity End Date: November 8, 2016
- Prime Implementing Partner: Tetra Tech, Inc.
- Teaming Partners/Sub-awardees: Power Engineers, GardaWorld, USACC, SMART Engineers
- Geographic Coverage: Afghanistan, see Figure 1 below



*The light blue squares represent multiple projects. The purple circles represent a single project.

Figure 1 2009 – 2016 Tt AESP Project Locations¹

¹ Map Source: Tt AESP’s Afghan Info Reporting Site

EXECUTIVE SUMMARY

This Second Quarter (Q2) report covers the period from January 01, 2016 to March 31, 2016. During this period, Tt AESP submitted 279 deliverables. Key deliverables this quarter included two revised energy sector Request for Proposals (RFPs) including the associated technical documents and engineering cost estimates. These RFPs covered the transmission line and substations for SEPS Completion. Other important deliverables included the QA-CMS Biweekly and Monthly Reports, QA Technical Manual, Final Report of the Afghan Women Internship Program for the academic year 2015, 65% interim design review report and 99% civil partial memo for the AUAF Women's dormitory. Also, Tt continued submitting weekly and biweekly photo submissions for the ongoing projects. The Kajaki CMS work order had also many key deliverables during this quarter, such as: the Security Assessment Plan, the Comprehensive Life Support Plan, the Helicopter Transport Services Plan, and the Kandahar Operations Support Base Plan. These documents highlight the diversity and breadth of work that AESP has completed this quarter.

Importantly this quarter, AESP transitioned into the role of Owner's Engineer at Kajaki Dam and assumed full responsibility of base life support, security, and logistics for the Kajaki Dam construction site. Through a transition process which occupied almost two months of the second quarter of FY 2016, Tetra Tech AESP mobilized a Quality Assurance (QA) team at the Kajaki Site, made up of six QA inspectors and two senior engineers. This allowed Tt AESP to replace both the previous Owner's Engineer in provision of Construction Management Services (CMS), but also to assume provision of independent QA, replacing the incumbent QA contractor.

During Tetra Tech's time as Owner's Engineer and provider of QA services, the construction contractor for the Kajaki Hydropower Plant (HPP) fully remobilized to the site in February, almost five months after the initial evacuation from the site. As a result of the full remobilization, hydrostatic testing as now been completed, and the installation of the spiral case (including concrete pouring) is underway.

During this quarter, AESP also continued fulfilling its role as QA monitor for the Power Transmission Expansion and Connectivity (PTEC) Program. This role required review of schedules, plans, progress, factory acceptance testing, and reporting findings to USAID. AESP also continued fulfilling its role of providing Construction Management Services (CMS) for PTEC, acting as a major stakeholder in assuring the quality construction of electricity infrastructure projects in Afghanistan.

Highlights of the quarter within each sector, noted below, exemplify AESP's diverse support of the USAID OEGI mission in Afghanistan.

Summary of Results for the Reporting Period and Key Accomplishments

Energy

A leading challenge for the development of Afghanistan is providing reliable power to all regions. This priority is reflected in Tt AESP's work; as the majority of efforts in Q2 FY 2016 were directed towards supporting USAID OEGI through energy related work orders. Past work orders have focused on the provision of design, planning, and bidding assistance services. Currently, the emphasis is focused on bidding assistance and the subsequent Construction Management Services (CMS) and Quality Assurance (QA) Services required during the construction phase of these projects. AESP currently has seven active long-term work order (WO-LT) and three administrative work orders (WO-A) in the Energy sector.

Kajaki HPP

This quarter, under WO-LT-0093 Kajaki CMS, AESP assumed full responsibility of Kajaki site management duties which include: camp security, logistics, and base life support (BLS). AESP also assumed the full role of Owner's Engineer at Kajaki Dam, providing QA and CMS oversight, as the previous contractor fully demobilized.

Tetra Tech became responsible for providing Kajaki camp security on February 1, 2016. Tetra Tech's Risk Management Consultant (RMC) GardaWorld began mobilizing to the site in January 2016. Additionally, Tetra Tech became responsible for the Afghan Personnel Protection Forces (APPF) subcontract on February 1, 2016.

Tetra Tech began providing helicopter services with an MI-8MTV in January 2016, and mobilized an additional MI-26 helicopter to provide heavy lift services in March 2016. While the MI-26 helicopter was originally scheduled to fly for two months, Tetra Tech was able to condense this movement to one month, and successfully move over 300 tons of construction equipment from Kandahar to Kajaki. Tetra Tech's provision of helicopter services allowed materials which had been stranded in Kandahar due to the closure of Highway 611 to be moved to the Kajaki site. This included successful transport of four hydrostatic test plugs, as well as transport of three cone valves and three hoods for the U.S. Army Corps of Engineers (USACE).

While mobilization of BLS staff to Kajaki originally began in the last month of the previous quarter, mobilization continued until Tetra Tech assumed full control of the Kajaki site on February 24, 2016. During this time, the previous provider of camp security, logistics, and BLS transitioned off of the site and was completely demobilized by February 29, 2016.

Tetra Tech also assumed the role of Owner's Engineer during this quarter. This role has included the review of submittals, providing engineering recommendations and QA oversight, attending weekly meetings, and continuing daily coordination of all onsite activities. Through a transition process which occupied almost two months of the second quarter of FY 2016, Tetra Tech AESP mobilized a Quality Assurance (QA) team at the Kajaki Site, made up of six QA inspectors and two senior engineers. During this time, the incumbent QA contractor demobilized from the site, concluding demobilization at the end of the second quarter. This allowed Tetra Tech AESP to replace both the previous Owner's Engineer, but also to assume provision of independent QA, replacing the previous contractor.

During Tetra Tech's time as Owner's Engineer and provider of QA services, the construction contractor for the Kajaki Hydropower Plant (HPP) fully remobilized to the site (February 11-15, 2016), almost five months after the initial evacuation from the site. As a result of the full remobilization and increased welding works, hydrostatic testing has now been completed, and the installation of the spiral case (including concrete pouring) is underway.

PTEC

A priority for USAID OEGI has been the Power Transmission and Connectivity (PTEC) Program. A major component of PTEC has been connecting the Northeast Power System (NEPS) to the Southeast Power System (SEPS). The NEPS-SEPS Connector will create a 220kV high voltage connection from Southern Afghanistan to secure power from its neighbors to the North.

During this Quarter, AESP had four active long-term work orders (WO-LT) related to the design of the NEPS and SEPS electrical systems. WO-LT-0048 and WO-LT-0063 include designs for the new 220kV transmission lines and substations from Arghandi to Kandahar East and the Salang Tunnel Substation, respectively. WO-LT-0091 includes the 220kV transmission lines and substations for SEPS completion.

Tetra Tech also provided bidding support services to Da Afghanistan Breshna Sherkat (DABS) during Q2 FY 2016 as described below. This included observing bid related committee meetings and activities, drafting and editing bid memos, preparing the template of the Bid Evaluation Report for DABS, and developing and refining engineer's estimates.

WO-LT-0048 provides design and bid support services for the seven substations and the seven transmission line segments running from the future Arghandi 500/220/20kV Substation to Kandahar Substation. The first two of the seven substations (Sayedabad and Ghazni) and the first two segments for the transmission lines (Arghandi – Sayedabad, and Sayedabad – Ghazni) are currently under construction. Tetra Tech AESP is providing CMS and QA services on these four projects. The next five substations and the next five transmission line segments are currently in the bidding process with DABS. Both of these contracts are expected to be awarded early in the next quarter.

WO-LT-0063 Amendment (AMD) 8 is for the 220kV Substation and 20kV Network serving the Salang Tunnel. Tt AESP continues to provide bidding support services to DABS. The contract will be awarded early in Q3 FY 2016.

Under WO-LT-0090, which provided Quality Assurance Services for PTEC implementation activities, Tt began monitoring and evaluating the construction of transmission lines and substations traversing from Arghandi to Ghazni. Provision of QA Services for the PTEC project has continued under WO-LT-0092 AMD 1: Power Transmission Expansion and Connectivity (PTEC) Program Quality Assurance (QA). Furthermore, Tt assumed Construction Management Services (CMS) responsibilities under WO-LT-0092 AMD 2: PTEC Construction Management Services (CMS).

Under WO-LT-0091, Tetra Tech prepared the electrical designs and contractual bidding documents necessary for completion of SEPS 110kV transmission lines and substations in Kandahar and Helmand Provinces. This quarter, Tt AESP submitted revised, complete RFPs for the transmission line and substation portions of this work order. The repackaged bids were submitted to USAID and DABS for review, and now both transmission and substation RFPs have been published by National Procurement Authority (NPA/DABS). Furthermore, work continued on AMD 1, a load flow study to determine whether the existing 110kV line from Kajaki Hydro Power Plant (HPP) to Durai Junction Substation can carry 51 Megawatt (MW). During this quarter, Tt submitted the overall, revised technical evaluation report to USAID.

Other

In Q2 FY 2016, Tetra Tech worked on three Administrative Work Order (WO-A) relating to energy. Through WO-A-0101, Tt AESP is providing design review services for DABS' existing work plan and proposed schedule to upgrade the SCADA control systems at Tarakhil Power Plant (TPP). Under WO-A-0103, Bulk Metering Bid Assistance, Tt provided evaluation support to DABS for the bulk metering bid. The DABS committee completed their evaluation and will submit a report to DABS management early in Q3 FY 2016. Also this quarter, Tt received NTP for WO-A-0104 DABS 220 kV Transmission Line Tower – Turkmenistan Line, Tt is conducting an independent evaluation of the cause of failure of three towers on the 220kV transmission line from Naibabad to Pul-e-Khumr.

Under WO-LT-0083 AMD 3 Kandahar Solar Transaction Assistance, Tt AESP is providing technical assistance to the USAID off-budget project to install a 10 MW solar photovoltaic (SPV) generating plant in Kandahar. Technical assistance included assessing the capability, availability, pros and cons of using existing 20kV distribution feeders in the area and installing a new 20kV or 35kV feeder for the SPV. Tt AESP is also providing technical assistance on the structuring of EPC+IPP SPV projects and legal assistance on the power purchase agreement (PPA). Bids are expected to be submitted to USAID in the first month of Q3 FY 2016.

Transportation

Tt AESP had one active transportation work order in FY 2016 Q2 dealing with design and submittal reviews, technical analyses, and design plans for the road stretching from Gardez to Khost.

For AESP Work Order LT-0084 Gardez to Khost (GK) Road Phase 4, Tt Kabul and Tt Reachback both have continued to provide engineering consultant reviews for contractor as-built shop drawings of drainage structures and bridge submittals. Tt Kabul engineers have continued to attend progress meetings held at USAID on a spontaneous, as-needed basis. Tt Kabul has also created bound record sets of the road drainage structures, both for delivery to USAID and internal record-keeping purposes. Tt will continue to review as-built shop drawings for bridges into the next quarter. Close out of this work order is expected in the beginning of the next quarter.

Vertical Structures

AESP has two active work orders in the Vertical Structures' Sector. These include Work Order LT-0082 AMD 1 – The American University of Afghanistan (AUAF) Women's Dormitory, and Work Order LT-0082 AMD 2 – Sardar Girls' High School Fire Door Replacement.

Under WO-LT-0082 AMD 1 American University of Afghanistan Women's Dormitory, Tt is performing multi-disciplinary QA design reviews of the construction contractor's proposed designs for the 200-bed women's dorm. This has included reviews of 65% design development packages, 99% civil and site utilities' construction phase package. Tt has provided review with recommendations, submittal log, design review sheet and recommendation for resubmittal when necessary.

Tt received NTP for WO-LT-0082 AMD 2 for Sardar Girls' High School Fire Doors' Replacement on March 16, 2016. Under this Work Order, Tt has been assigned to perform QA services of construction submittal reviews and construction site observations of the 23 fire door replacements needed at Sardar Girls' High School. Tt has reviewed the Contractor's Work Plan and Construction schedule.

Water Resources and Water Sanitation

This Quarter AESP had no active work orders in either of the Water Sectors. Tt is available should any new work orders concerning water resources or water sanitation be issued.

Technical Support and Oversight

Technical Support and Oversight includes work orders that allow AESP to provide technical assistance and solution to USAID as the need arises. This includes work orders that do not clearly fit within the categories defined in the original AESP Task Order or that cross multiple sectors. Technical Support and Oversight Services work orders allows AESP to show its flexibility, mobility, depth of activities, and commitment to capacity building and gender equality.

This quarter, AESP provided technical support to USAID under two long-term work orders, and one administrative work order. WO-LT-0065 provides media assistance to USAID. This work order continued to submit weekly and biweekly photos demonstrating the progress of construction on the Arghandi – Ghazni Transmission Lines and Substation, Salang Tunnel Substation, Kajaki Dam and Kandahar Solar Transaction projects.

The Afghan Women Internship Program, under long term Work Order WO-LT-0042, exemplifies AESP's commitment to capacity building and gender equality. The Afghan Women Internship Program supports the technical and professional development of female students in their final years of engineering studies. Under the direct supervision and mentorship of Tt professional expats and local professional staff, the program provides: opportunities for practical training, real world engineering experiences, and strengthened communication skills. This quarter, the four female engineering students graduated three of whom were offered full-time positions. The fourth, who was still completing her university, has extended her internship contract for the following year. For the 2016 academic year of the Afghan Women Internship Program, AESP received approval to hire eight interns who joined Tt in the first month of Q2 FY 2016. These eight interns include five architects, one civil and two electrical engineering students at Kabul University and Kabul Polytechnic University.

Under WO-A-0102, Tt was requested to coordinate and provide logistical support for a retreat between DABS and USAID. The aim of the retreat was to discuss opportunities to brainstorm ways to improve collaboration between DABS and USAID, and methods to increase daily communications and to coordinate long-term strategic planning.

Capacity Building

Tetra Tech AESP is dedicated to USAID's mission of capacity building. Since the inception of the task order, Tt AESP has focused on training AESP's local staff to excel to meet international standards, not only in their chosen professions, including a series of technical trainings relating to the Kajaki Hydropower plant. Tetra Tech field staff have also received health & safety trainings including confined space, emergency eye wash, and materials safety data sheet training.

Due to Tt's commitment to capacity building, the constitution of the staff has gradually shifted from a mostly expatriate staff to a highly capable local national staff which currently comprises approximately 82% of Tt's employees.

Tt's management staff holds weekly "all hands meetings" for capacity building for training in teamwork, leadership, public speaking, and communication. Accordingly, Tt's professionals have taken a more active role in growing DABS' abilities by providing advice in the bid opening and evaluation process this quarter and setting up an embed office at DABS' Headquarters.

Constraints and Critical Issues

Although security concerns did not prevent Tetra Tech AESP from completing its mission this quarter, security remains a significant concern. Throughout this quarter, AESP has seen and will continue to see an increased number of teams going into the field to fulfill QA auditing and CMS inspection activities, often to areas where security is a major issue. Tetra Tech has increased security efforts through more extensive daily security briefings and closer involvement of Tt's Security Team in logistical planning. Tetra Tech will continue to respond to the rapidly changing security situation to ensure the safety of our personnel.

As part of the ongoing work at Kajaki Dam, Tt's Security Team has continued to coordinate with Afghan Personnel Protection Forces (APPF) and Afghan National Army (ANA) to remain vigilant and aware of security threats in the area. Thus far, security has not significantly impacted Tt field operations.

Conference facilities at the Tt Villa remained available as a practical option for USAID to hold business meetings with other implementing partners and Afghanistan stakeholders. Using the Tt Villa facilities mitigates the security risks associated with travel around Kabul during periods of unpredictable insurgent activity. Tt AESP will continue to provide hosting capabilities for USAID meetings.

Summary

As described above, Tt AESP has provided USAID OEGI with diverse engineering expertise and dynamic support for USAID mission goals and objectives throughout the second quarter of contract Year 7. The broad diversity of the Tt AESP program is evident in the variety of services and deliverables submitted to USAID OEGI this quarter. The expatriate staff continues to work closely with the LN staff to develop their skills including project management, project workflow, construction management, construction quality assurance contracts, and technical writing. Looking forward, Tt AESP will remain responsive, mobile, and relevant in the remaining quarters of fiscal year 2016. Tetra Tech will continue processing work orders issued by USAID OEGI that provide needed technical services, capacity building, and gender equality opportunities in Afghanistan.

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ACRONYMS

A/E	Architect and Engineer
ACOR	Alternate Contracting Office Representative
ADB	Asian Development Bank
AESP	Afghanistan Engineering Support Program
AMD	Amendment
ANA	Afghan National Army
APPF	Afghan Personnel Protection Forces
AUAF	American University of Afghanistan
BLS	Basic Life Support
CM	Construction Management
CMS	Construction Management Services
DABS	Da Afghanistan Breshna Sherkat
EB	Estimated Budget
EDMS	Electronic Document Management Services
FY	Fiscal Year
GK	Gardez to Khost Road
H&S	Health and Safety
HPP	Hydro Power Plant
LN	Local National
LOE	Level of Effort
MIS	Management Information System
MW	Megawatt
NEPS	Northeast Power System
NPA	National Procurement Authority
NTP	Notice to Proceed
OEGI	Afghanistan Office of Economic Growth, and Infrastructure
P&D	Planning and Design
POC	Point of Contact
PPA	Power Purchase Agreement
PTEC	Power Transmission Expansion, and Connectivity
QA	Quality Assurance
QC	Quality Control
RFPs	Request for Proposals
RMC	Risk Management Company
ROM	Rough Order of Magnitude cost estimate
SCADA	Supervisory Control and Data Acquisition
SEPS	Southeast Power System
SOO	Statement of Objective
SOW	Scope of Work
SPV	Solar Photovoltaic
TPP	Thermal Power Plant
TPP	Tarakhil Power Plant
Tt	Tetra Tech
USACE	United States Army Corps of Engineers
USAID	United States Agency for International Development
WO	Work Order
WO-A	Administrative Work Order
WO-LT	Long Term Work Order
WP	Work Plan

1.0 ACTIVITY IMPLEMENTATION

1.1 KEY ACTIVITIES ACCOMPLISHED DURING THE YEAR

Tt AESP is responsible for planning, designing, and providing technical support and oversight of assigned USAID OEGI's infrastructure projects and related engineering activities in Afghanistan. In accordance with the basic USAID OEGI Architect and Engineer (A/E) IQC contract statement of work, AESP creates work orders (WO) to track individual projects.

Work orders fall into one of two categories: administrative (A) or long-term (LT). Administrative work orders are defined as tasks requiring a total level of effort (LOE) less than or equal to 18 business days (144 work hours). Long-term work orders are defined as activities requiring a total LOE exceeding 18 business days. For each long-term work order, Tt AESP prepares and submits a Work Plan (WP) and an Estimated Budget (EB).

Tt AESP supports USAID OEGI's mission throughout Afghanistan using both administrative and long term work orders. For tracking purposes, work orders are broken into one of the following sectors: Energy, Vertical Structures, Transportation, Water Resources, Water and Sanitation, and Technical Support as stated in Tt AESP's Year 7 Work Plan. This quarter, Tt AESP provided support under 15 work orders in the Energy Sector, one (3) work order in Vertical Structures, one (1) Transportation work orders and two (3) Technical Support and Oversight work orders. Hence, the majority of AESP work orders and subsequent work was related to the energy sector for the second quarter of fiscal year 2016. Table 1.1 below describes the work order activities performed during the second quarter.

Table 1.1 Summary of Work Completed During the Second Quarter of FY 2016

Number	Work Order Title	Summary of Work Completed
WO-A-0100	Interim QA/QC Monitoring & Evaluation and Construction Management Services	This quarter, the work designated for this WO shifted to WO-LT-0092 AMD 2 when it received NTP on January 5, 2015.
WO-A-0101	Tarakhil Power Plant SCADA Upgrade Review	Tetra Tech sent a Confirmation Letter to USAID on November 22, 2015; and received USAID concurrence on November 23, 2015. Tt submitted to USAID a technical memo reviewing the proposed Work Plan and Schedule created by DABS on December 10, 2015. Additionally, Tt further reviewed and submitted additional comments to the proposed work plan and schedule on February 24, 2016.
WO-A-0102	DABS Coordination Retreat	Tetra Tech sent a Confirmation Letter to USAID on January 15, 2016 and received USAID concurrence on January 21, 2016. The DABS-USAID Coordination retreat was held on January 23, 2016. The minutes of the retreat were distributed on January 31, 2016. This Work Order was closed on February 3, 2016.
WO-A-103	Bulk Metering Bid Assistance	Tetra Tech sent a Confirmation Letter to USAID on February 25, 2016 and received USAID concurrence on the same day. Bid Evaluation began on February 27, 2016, and continued until March 31, 2016.

WO-A-104	DABS 220 kV Transmission Line Tower Inspection	Tetra Tech sent a Confirmation Letter to USAID on March 19, 2016 and received USAID concurrence on March 21, 2016. Photos of the Tower Failure were received on March 22, 2016, and lab testing is ongoing.
WO-LT-0042 AMD 4	Afghan Women Internship Program	Tt submitted the Work Plan and Estimated Budget for AMD4 extension on November 01, 2015 and received approval on November 04, 2015. Tt submitted the WP and EB for AMD5 on December 07, 2015 and received NTP on December 29, 2015. The Final Report for this Work Order was submitted to USAID on February 17, 2016.
WO-LT-0042 AMD 5	Afghan Women Internship Program	In this quarter, seven new female interns, and one intern from the previous academic year's internship program, joined Tt AESP. Interns received online training including on the MS Office Package, AutoCAD 2014, Health and Safety, Effective Technical Writing, Tt file structures and share drive, Effective Presentations Skills. Interns also worked with AESP engineers for hands-on experience in: submittal review of Tt active work orders, shadowed by AESP engineers and started electrical training.
WO-LT-0048 AMD 4 and AMD 6	Qarabagh to Kandahar East Five Substations - RPC At Kabul and Kandahar East	Tt AESP continued to provide observers and participants to the DABS' bid evaluation. The Bid Evaluation Report has been submitted by the committees to DABS' management. DABS Contracting is verifying documents submitted by the bidders.
WO-LT-0048 AMD 5	Transmission Line from Ghazni to Kandahar East	The project was re-bid by DABS. Bids were received and opened under the new law as required by NPA. DABS appointed an evaluation committee that started work in early March. Tt has been participating as observers and facilitators.
WO-LT-0059	NEPS System Protective Relay	USAID requested a SOW and ROM to deliver protective relaying coordination studies to key portions of Afghanistan's NEPS medium voltage and high voltage electrical grid. This work has continued to be on hold throughout this quarter.
WO-LT-0063 AMD 8	Salang Tunnel Substation Combined RFP and Transformer Vector Modification	During this quarter, the Financial Evaluation was completed by the Evaluation Committee. Tt AESP provided observers and participants to the Financial Evaluation Committee. Tt received the Final Evaluation Report from DABS on March 30, 2016 for review. Verifications of bidders are still being completed.
WO-LT-0065	Media Assistance	This quarter, Tt continued submitting construction progress photos of the Kajaki Hydropower Plant, Arghandi-Ghazni Transmission Lines, Substations, and other active work orders on a

		Biweekly basis. Tt also started submitting weekly photos of site construction per USAID's request.
WO-LT-0070 AMD 4	Tarakhil Power Plant Power Block A, B and C Controls Repair	Tt received a hold request from the ACOR on July 17, 2015.
WO-LT-0070 AMD 6	Phoenix Support at Tarakhil	Tt was asked to provide technical assistance to Phoenix at the Tarakhil Power Plant. Tt submitted comments on a scope of work for water piping repair on May 24, 2015. The ACOR asked Tt to hold this work order on July 17, 2015.
WO-LT-0082	Engineering Support for Vertical Structures	Tt Reachback completed a design review of Sabez School on December 7, 2014. Activities under the work order are contingent on USAID forwarding assignments.
WO-LT-0082 AMD 1	American University of Afghanistan (AUAF) Women's Dormitory	USAID asked Tt to provide engineering design review and construction phase technical review services for the new 200 bed Women's Dormitory at the American University of Afghanistan (AUAF). Tt submitted the 65% Design Development package to USAID on January 21, 2016. On March 02, 2016 Tt submitted the 65% civil / site utilities' package to the USAID. Tt submitted the construction schedule on March 14, 2016, the Geotechnical Investigation Report on March 17, 2016, the 99% civil / site utilities' on March 26, 2016 and 19 construction submittals on March 17, 2016 for USAID final consideration.
WO-LT-0082 AMD 2	Sardar Kabuli Girls' High School Fire Door Replacement Quality Assurance Services	Tetra Tech sent Rev 4 of the Work Plan and Rev 3 of the Estimated Budget to USAID on March 15, 2016. Tetra Tech received NTP on this Work Order on March 16, 2016. Tetra Tech completed a preliminary site visit on March 27, 2016.
WO-LT-0082 AMD 3	American University of Afghanistan Women's Dormitory Quality Assurance	Tetra Tech received a Scope of Objectives (SOO) for this work order on February 24, 2016. Tetra Tech sent Rev 0 of the Work Plan and Estimated Budget to USAID on March 16, 2016. Tetra Tech received comments on these submissions and is working to respond to these comments.
WO-LT-0083 AMD 3	Kandahar Solar Transaction Assistance	Tt Responded to a series of inquiries from USAID about the feeders for a solar photovoltaic system in Kandahar. Tt provided comments on the commissioning, feeder chronology, and synchronizing relays.
WO-LT-0084	G-K Road Phase 4	Tt continued to support OEGI through the review of Contractor as-built shop drawing submittals for Phase IV of the GK roadway and bridge construction. During this quarter, Tt has reviewed all road drainage structure as-built drawings and completed this task well within the Estimated Budget approved specific for this as-built drawing

		review. It reviewed more than 430 as-built shop drawing submittals to date; which also contains as-built resubmittals.
WO-LT-0090	NEPS-SEPS Interim QA Monitoring and Evaluation Service	During this quarter, Tetra Tech AESP received NTP on WO-LT-0092 AMD 1, which effectively replaced WO-LT-0090. The QA Technical Manual was submitted to USAID under WO-LT-0090 this quarter. This WO was closed and an evaluation was sent to USAID on January 17, 2016.
WO-LT-0091	SEPS Completion	Revised bidding documents were submitted to USAID, DABS, and NPA for solicitation and uploading to the NPA website.
WO-LT-0091 AMD 1	Kajaki-Durai Junction Transmission Line	Tetra Tech submitted the Task 5 Deliverable – Overall Technical Assessment, which included the deliverables for Tasks 1-4 in the Appendices. This report was submitted to USAID on January 22, 2016 as Rev 0, and again to USAID on March 1, 2016 as Rev 1.
WO-LT-0092	Power Transmission Expansion and Connectivity (PTEC) Program Oversight	As part of this base Work Order, Tetra Tech has provided electronic document management services (EDMS) to PTEC and Kajaki projects. It implemented the ProjectWise system for Kajaki and has continued set up of ProjectWise for Arghandi-Ghazni Transmission Line and Ghazni and Sayedabad substations.
WO-LT-0092 AMD 1	Power Transmission Expansion and Connectivity (PTEC) Program Quality Assurance (QA)	Tetra Tech provided Quality Assurance services to the Arghandi, Sayedabad, and Ghazni Transmission Lines and Substations projects.
WO-LT-0092 AMD2	Afghanistan Power Infrastructure Construction Management Services (CMS)	Tetra Tech provided Construction Management Services to the Arghandi, Sayedabad, and Ghazni Substations and Transmission Lines projects.
WO-LT-0093	Kajaki Hydroelectric Power Plants Construction Management Services	<p>This quarter, under WO-LT-0093 Kajaki CMS, AESP assumed full responsibility of Kajaki site management duties which include: camp security, logistics, and base life support (BLS). AESP also assumed the full role of Owner's Engineer at Kajaki Dam, providing QA and CMS oversight, as the previous contractor fully demobilized.</p> <p>Tetra Tech became responsible for providing Kajaki camp security on February 1, 2016. Tetra Tech's Risk Management Consultant (RMC) GardaWorld began mobilizing to the site in January 2016. Additionally, Tetra Tech became responsible for the Afghan Personnel Protection Forces (APPF) subcontract on February 1, 2016.</p> <p>Tetra Tech began providing helicopter services with an MI-8-MTV in January 2016, and</p>

		<p>mobilized an additional MI-26 helicopter to provide heavy lift services in March 2016. While the MI-26 helicopter was originally scheduled to fly for two months, Tetra Tech was able to condense this movement to one month, and successfully move over 300 tons of construction equipment from Kandahar to Kajaki. Tt's provision of helicopter services allowed materials which had been stranded in Kandahar due to the closure of Highway 611 to be moved to the Kajaki site. This included successful transport of four hydrostatic test plugs, as well as transport of three cone valves and three hoods for the U.S. Army Corps of Engineers (USACE).</p> <p>While mobilization of BLS staff to Kajaki originally began in the last month of the previous quarter, mobilization continued until Tetra Tech assumed full control of the Kajaki site on February 24, 2016. During this time, the previous provider of camp security, logistics, and BLS transitioned off of the site and was completely demobilized by February 29, 2016.</p> <p>Tetra Tech also assumed the role of Owner's Engineer during this quarter. This role has included the review of submittals, providing engineering recommendations and QA oversight, attending weekly meetings, and continuing daily coordination of all onsite activities. Through a transition process which occupied almost two months of the second quarter of FY 2016, Tetra Tech AESP mobilized a Quality Assurance (QA) team at the Kajaki Site, made up of six QA inspectors and two senior engineers. During this time, the incumbent QA contractor demobilized from the site, concluding demobilization at the end of the second quarter. This allowed Tt AESP to replace both the previous Owner's Engineer, but also to assume provision of independent QA, replacing the previous contractor.</p> <p>During Tetra Tech's time as Owner's Engineer and provider of QA services, the construction contractor for the Kajaki Hydropower Plant (HPP) fully remobilized to the site (February 11-15, 2016), almost five months after the initial evacuation from the site. As a result of the full remobilization and increased welding works, hydrostatic testing has now been completed, and the installation of the spiral case (including concrete pouring) is underway.</p>
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1.2 KEY ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

Table 1.2 below describes the activities planned for the third quarter. Actual work performed will be described in detail in the second quarterly report.

Table 1.2 Summary of Work Planned for the Third Quarter of FY 2016

Number	Work Order Title	Summary of Work Planned
WO-A-0101	Tarakhil Power Plant SCADA Upgrade Review	Unless USAID provides further direction, no additional work is anticipated under this work order at the time of the writing of this report.
WO-A-0103	Bulk Metering Bid Assistance	The committee appointed by DABS has completed their evaluation and will submit a report to DABS management in early April 2016.
WO-A-0104	DABS 220 kV Transmission Line Tower Inspection	Tetra Tech was requested to investigate the root cause of multiple tower failures on the Naibabad n to Pul-e-Khumri Transmission line. NTP was given for this work on March 21, 2016. The investigation team will continue analysis of documents and information on the failed towers, as well as running tests on the provided steel samples.
WO-LT-0042 AMD 5	Afghan Women Internship Program	The anticipated AMD5 for academic year 2016 will increase the number of interns 4 to 8 interns. In Q2, the internship program will continue with additional training and shadowing opportunities. Tt has requested a site visit at Camp Eggers. This year Tt has two practical projects under LT0082 AMD2 and AMD3, which will be an experience for interns to have a site visit, to review the submittals, to compare as-built drawings and shop drawings and to complete some other related engineering and architecture works.
WO-LT-0048 AMD 4 and AMD 6	Qarabagh to Kandahar East Five Substations - RPC At Kabul and Kandahar East	DABS will conclude reference checks of the lowest priced technically qualified bidder, and seek approval from USAID and from the Afghan National Procurement Authority (NPA) in the Office of the President of Afghanistan. Tt AESP will continue to provide bidding support services to USAID and DABS through the award of contract to the successful bidders. The Contract is anticipated to be awarded by DABS in April 2016.
WO-LT-0048 AMD 5	Transmission Lines from Ghazni to Kandahar East	The Bid Evaluation Committee will finalize the bid evaluation report. Bid Evaluation will likely be completed in mid-April 2016. DABS will conclude reference checks of the lowest priced technically qualified bidder, and seek approval from USAID and from the Afghan National Procurement Authority (NPA) in the Office of the President of Afghanistan. Tt AESP will continue to provide bidding support services to USAID and DABS through the award of contract to the

		successful bidders. This Contract is anticipated to be awarded in May 2016.
WO-LT-0063 AMD 8	Salang Tunnel Substation Construction Combined RFP/ Transformer Vector Group Modification	DABS will conclude reference checks of the lowest priced technically qualified bidder, and seek approval from USAID and from the Afghan National Procurement Authority (NPA) in the Office of the President of Afghanistan. Tt AESP will continue to provide bidding support services to USAID and DABS through the award of contract to the successful bidders. The Contract is anticipated to be awarded by DABS in early April 2016.
WO-LT-0065	Media Assistance	Tetra Tech will continue to submit construction progress photos and captions to USAID on a weekly and Biweekly basis. Tetra Tech will also continue to provide media assistance to USAID as the need arises.
WO-LT-0070	Tarakhil Power Plant Water Piping System	It is anticipated that this work will continue to be on hold throughout Q3 FY 2016.
WO-LT-0082 AMD 1	American University of Afghanistan (AUAF) Women's Dormitory	Tetra Tech will have completed reviews at the 95% and 100% design phases. Tt may complete the Final Report during Q2 FY2016. Tt will have worked all allotted man-hours in review of construction submittals per Task 7.
WO-LT-0082 AMD 2	Sardar Kabuli Girls' High School Fire Door Replacement Quality Assurance Services	The Construction phase of this project will begin in the next quarter, at which time, Tetra Tech will begin work under Task 2 – Review of Non-Approved and Required Contractor Submittals and Task 3 – Construction Quality Assurance Monitoring and Reporting.
WO-LT-0082 AMD 3	American University of Afghanistan Women's Dormitory Quality Assurance	Tetra Tech received comments from USAID on the Work Plan and Estimated Budget. Tt AESP expects to receive NTP from USAID on this Work Order, once the Work Plan and Estimated Budget are finalized. Tt will provide QA monitoring of the construction-related activities of the 200-bed women's dorm.
WO-LT-0083 AMD 3	Kandahar Solar Transaction Assistance	Tetra Tech will provide bidding support services, technical assistance, and legal Power Purchase Agreement (PPA) assistance to USAID through the award of the contract to the successful bidder. Bids are to be submitted to USAID on April 24, 2016.
WO-LT-0084	G-K Road Phase 4	The as-built drawing reviews of only two of the seven bridges remain in progress, with the as-built drawing reviews of the five other bridges having been completed. All as-built shop drawing reviews and record binding is expected to be completed before the end of FY16 Q3.

WO-LT-0091	SEPS Completion	Tt AESP will provide bidding support services to USAID and DABS. Bids are expected to be submitted for both substations and transmission lines on May 1, 2016.
WO-LT-0091 AMD 1	Kajaki-Durai Junction Transmission Line	Tetra Tech received additional comments from USAID on the load flow study for the existing 110kV line from Kajaki HPP to Durai Junction 51 MW Substation. Tetra Tech expects to submit Rev 2 of this report in mid-April 2016.
WO-LT-0092	Power Transmission Expansion and Connectivity (PTEC) Program Oversight	Tt will continue to maintain and utilize ProjectWise for Kajaki project, and will complete set up and utilization of ProjectWise for Arghandi-Ghazni Transmission Line and Ghazni and Sayedabad substations.
WO-LT-0092 AMD 1	Power Transmission Expansion and Connectivity (PTEC) Program Quality Assurance (QA)	Work is expected to expand to other construction projects (Salang Tunnel Substation, and Ghazni – Kandahar East substations and transmission lines) when these contracts are awarded to construction contractors.
WO-LT-0092 AMD 2	Afghanistan Power Infrastructure Construction Management Services (CMS)	Construction Management Services is expected to expand to other construction projects (Salang Tunnel Substation, and Ghazni – Kandahar East substations and transmission lines) when these contracts are awarded to construction contractors.
WO-LT-0093	Kajaki Hydroelectric Power Plants Construction Management Services	<p>Tetra Tech will continue to provide CMS and QA oversight, and prepare for the mechanical and electrical outage which will begin in Q4 FY 2016. Tt will continue to coordinate transport from Kandahar to Kajaki for materials and personnel in support of Base Life Support (BLS) for the Kajaki HPP project for the installation of Kajaki Unit Number 2.</p> <p>Following full remobilization, the currently estimated project completion date is September 30, 2016. Tetra Tech AESP will continue to provide QA and CMS for the Kajaki HPP until project completion.</p>

1.3 LESSONS LEARNED

In accordance with the contract, AESP submits an evaluation form after the completion of all work orders in order to obtain feedback to help improve performance on future work orders for this project. This quarter three evaluations have been submitted to USAID POCs (WO-LT-0090, WO-A-0100 and WO-A-0102). Tt is waiting to receive back the six evaluation forms that were submitted to USAID during previous quarters. These evaluations form the basis of Tt's analysis for lessons learned and allow for continuous improvement of AESP's work.

1.3.1 Monitoring and Evaluation (M&E)

The primary goal of this project is to provide essential engineering support to the USAID Afghanistan Mission through a variety of activities and projects. As AESP acts as an extension of USAID in many of these activities, AESP's ability to monitor and evaluate our *direct* impacts on the beneficiaries of these programs is somewhat limited. Indicators, Targets and Results are provided below:

Table 1.3 Monitoring and Evaluation

Number	Indicator	FY 2016 Q2 Results	FY 2016 Target
I-1	Person hours of training completed in technical energy fields supported by USG assistance	298 hours	100 hours
I-2	Number of days of USG funded technical assistance in technical energy fields provided to counterparts of stakeholders	95 days	100 days
I-3	Percent of all contracts awarded for commodities and equipment that are fixed price.	100%	100%
I-4	Percent of all other types of contracts (i.e. services) awarded that are fixed-price.	100%	100%

2.0 COLLABORATION WITH GIROA, OTHER DONORS, OR OTHER USAID PROJECTS

2.1 LINKS WITH RELEVANT GIROA MINISTRIES

Tt AESP collaborated with DABS on numerous projects, including the NEPS-SEPS connector, Salang Tunnel Substation, SEPS Completion, Bulk Metering and coordination of a retreat with USAID. In addition, Tt AESP provided assistance to, and coordinated with, DABS commercial contractors; GFA Consulting Limited, Fluentgrid Ltd., KEC International Contractor, and 77 Construction Company.

2.2 LINKS WITH OTHER DONOR AGENCIES

AESP continues to take direction from USAID when coordinating with other donor agencies. AESP coordinated with the United States Army Corps of Engineers (USACE) on the SEPS completion project, and with USACE and ADB on the Arghandi-Chimtala Transmission Lines and Substations project.

2.3 LINKS WITH OTHER USAID PROJECTS

No significant events or activities to report during this quarter.

3.0 MANAGEMENT AND ADMINISTRATIVE ISSUES

3.1 PERSONNEL

There were several changes to personnel in Tetra Tech AESP during this quarter. Six new expatriates were hired. One expatriate filled the position of Transmission Line and Substation Engineer and one expatriate filled the position of Project Controls Specialist. Two expatriates were hired to work at the Kajaki Site, one as Senior Mechanical Engineer and the other as the Senior Hydro Engineer. One expatriate filled the position of Health and Safety (H&S) Specialist, and the replacement for the MIS Manager / Technical Writer was mobilized to Kabul. The current MIS Manager / Technical Writer transitioned to the interim role of Kajaki MIS Manager / Technical Writer to assist with the start-up of WO-LT-0093 and ease the transition the new MIS Manager. Additionally, the Energy Lead/ Planning

and Design (P&D) Director was reassigned to the role of Deputy Chief of Party for Kajaki CMS, and a new expatriate was mobilized to fill the role of Energy Lead/ P&D Director. The Technical Services Manager position transitioned into the Deputy Director of QA.

There were also key changes in Local National Staff this quarter. Tetra Tech hired six Kajaki inspectors, one Subcontractors Manager, one Subcontractors Specialist, one Chief of Maintenance, one HSE inspector, and one Procurement Specialist for WO-LT-0093 Kajaki CMS. Additionally, 13 employees were hired to provide Base Life Support for WO-LT-0093 Kajaki CMS.

During this quarter, Tetra Tech AESP promoted six LN staff. One Electrical Site Inspector was promoted to Deputy Director of Construction Management Services: Kajaki Dam, the MIS Administrative Assistant was promoted to Deputy MIS Manager, and one Cook was promoted to Administrative Assistant. Additionally, two AESP Interns were promoted to Jr. Civil Engineers, and one AESP Intern was promoted to Jr. Electrical Engineer.

Tt's Financial Analyst resigned on February 28, 2016, and this position is currently posted and is being filled. Additionally, one H&S Project Inspector was terminated and this position is currently posted and is being filled. Eight new interns were hired to participate in the Afghan Women's Internship Program under WO-LT-0042 AMD 5.

During this quarter, Tetra Tech continued a series of capacity building exercises. A seminar on the inner workings of hydropower plants (HPP), focusing on the Kajaki HPP project, was given to technical staff. Electrical engineers completed a multi-day course in technical writing, and all staff participated in a seminar on how to better utilize the Outlook calendar function. These exercises will continue throughout next quarter.

Gender equality plays an important role in staff planning at AESP. During this quarter, Tt AESP maintained gender percentages of 79% male and 21% female employees. Tt AESP will continue to support USAID's gender equality and female empowerment directive through the remainder of the task order. Tetra Tech's percentage of female employees has decreased significantly due to two changes in project scope: field work has increased as a result of QA and CMS activities and women are unable to complete site visits to remote locations due to the security condition, and the Kajaki Project work requires staff to stay overnight at the Kajaki HPP site which culturally is not an option for female employees at this time.

3.2 ADAPTION OF THE ACTIVITY

Year 7 of AESP has been marked by significant changes to the activity. During the inception and first five years of AESP, work focused on design, design review, and engineering studies.

However starting in Year 6, with the addition of QA Services for PTEC, AESP has continued to expand to provide Construction Management Services (CMS). This demonstrates the transformation of the focus of AESP work to construction and implementation from conceptual design and review.

As many projects initially designed in the first six years of AESP move into the bidding stage, Tt AESP continues to provide assistance to DABS throughout the bidding process for PTEC transmission lines, substations, and bulk metering. Once these contracts are awarded, AESP's scope will transition to primarily QA and CMS of these energy projects.

Furthermore, with NTP for WO-LT-0093, AESP has expanded to provide not only CMS, but BLS and Security Services for the Kajaki Hydropower Dam. AESP continues to adapt to meet the needs of USAID as OEGI expands into the implementation phase of its commitment in Afghanistan.

3.3 MODIFICATIONS AND AMENDMENTS

Previously, AESP had one modification to Contract No. EDH-I-00-08-00027-00 Task Order No 1: modification number 25. Mod 25 extended the contract end date to November 8, 2016, and provided increased LOE and budget for Year 7. No additional modifications or amendments occurred this quarter.

4.0 SUCCESS STORIES

Following is Tetra Tech AESP's Success Story for the Second Quarter of FY 2016. The success story details the impact the Gardez to Khost Road program has had on the Afghans who use the road to transport passengers or for commerce.



USAID
FROM THE AMERICAN PEOPLE

AFGHANISTAN

SUCCESS STORY

Quality on improved Gardez - Khost Road

GK Road will provide high speed connection for vehicles from Khost to Gardez, Kabul, and the rest of Afghanistan.



[Photo: Tetra Tech AESP]

A completed causeway along GK road assists in keeping heavy water flow off of the road and increase the design life of the GK road.

Increased access through the improved GK road will provide increased economic opportunities and additional security to the Paktia and Khost regions.

U.S. Agency for International Development
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Formerly a dirt road, damaged by heavy trucks, flood, and landslides, the Gardez – Khost (GK) Road did not adequately service the transport needs of Eastern Afghanistan. This road which connects Gardez, capital of Paktia province, with Khost City, capital of the Khost province, has significant strategic importance. The poor quality of this road posed numerous challenges for Afghans moving between the areas and surrounding provinces, and limited the transport of goods.

USAID has been working with various partners to construct a 101-kilometer road between the towns of Gardez and Khost. While Phase I, Phase II and Phase III sections of the roadway were previously completed, the final piece of the GK road is now completed.

Gardez-Khost Road Phase IV is a USAID construction project for the remaining 25 km of the road, and for the bridges which connect the Paktia and Khost Provinces in Southeast of Afghanistan. USAID has funded the planning, design, construction for the remaining 25 km, including repair of four bridges, and construction of two new bridges on this route.

USAID's Afghanistan Engineering Support Program provided engineering oversight for this construction – reviewing design drawings, as-built submittals and product data submittals for contract compliance. This additional effort by USAID ensured that construction was completed according to contract specifications, and was on-time and on-budget.

Construction on Phase IV included 451 different structures in order to minimize water damage by keeping water off of the surface. As water on or under a roadway is the single most significant cause of roadway damage, these structures will increase the design life of the road.

The improved Gardez-Khost road now provides a high speed connection for vehicles traveling from Khost to Gardez, Kabul, and the rest of Afghanistan. Approximately 3,000 vehicles use the road every day. This increased access from the Paktia and Khost provinces to the rest of Afghanistan will result in improved economies and security benefits, as transportation along this route becomes more achievable and less risky.

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